UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
ONE CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

NPDES PERMIT NUMBER: **MA0020869**

PUBLIC NOTICE START AND END DATES:

NAME AND MAILING ADDRESS OF APPLICANT:

SPRAGUE ENERGY
Two International Drive, Suite 200
Portsmouth, NH 03801-6809

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

SPRAGUE ENERGY
728 South Artery
Quincy, MA 02169

RECEIVING WATER(S): **Town River Bay (MA74-15)**

RECEIVING WATER CLASSIFICATION(S): **SB**

SIC CODE: **5171 Bulk Petroleum Storage**

Table of Contents

I. Proposed Action, Type of Facility, and Discharge Location

The above applicant has applied to the U.S. Environmental Protection Agency (EPA) for re-issuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge treated storm water into the designated receiving water. The existing permit was signed January 23rd, 2003 and became effective sixty (60) days later. This permit expired September 30, 2006. EPA received a completed permit renewal application from Sprague dated June 12, 2006. Since the permit renewal application was deemed timely and complete by EPA, the permit has been administratively continued.

The Sprague Oil facility, which is located in Quincy, Massachusetts, is engaged in the receipt, storage, and distribution of petroleum products. The spectrum of fuels handled by this facility consists of distillate (e.g., diesel, kerosene, and No. 2 Fuel Oil) and residual products (e.g., No. 6 Fuel Oil). Petroleum products are received in bulk quantities at the terminal's marine vessel dock. Product is then transferred to aboveground storage tanks located within the facility's tank farm area. Final distribution of product is conducted at the facility's truck loading rack. The NPDES discharge consists of treated storm water runoff from pervious and impervious surfaces at the facility including the tank farm and truck loading rack. The treated storm water is discharged to the Town River through Outfall 001 and Outfall 002. See Attachment A for the location of the facility.

II. Description of Discharge

A quantitative description of the effluent parameters based on recent discharge monitoring reports (DMRs) is shown on Attachment B of this fact sheet.

III. Receiving Water Description

Outfall 001 and Outfall 002 discharge into the Town River Bay (MA74-15), which is part of the Boston Harbor watershed and the Weymouth and Weir River sub-watersheds.

The Town River is classified as a Class SB water by the Massachusetts Department of Environmental Protection (MassDEP). The Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR") 4.05(4) (b) state that Class SB waters have the following designated uses: *These waters are designated as habitat for fish, other aquatic life and wildlife and for primary and secondary contact recreation. In approved areas they shall be suitable for shellfish harvesting with depuration (Restricted Shellfish Areas). These waters shall have consistently good aesthetic value.*

Section 303 (d) of the CWA requires states to identify those water bodies that are not expected to meet water quality standards after the implementation of technology based controls and, as such require the development of total maximum daily loads (TMDL). The 2006, 303 (d) report states that the Town River (MA74-15), from the headwaters at the Route 3A bridge in Quincy to its mouth at the Weymouth Fore River, is not attaining water quality standards because of organic enrichment/low Dissolved Oxygen (DO) and pathogens.

MassDEP is required under the CWA to develop a Total Maximum Daily Load (TMDL) for a water body once it is identified as impaired. A TMDL is essentially a pollution budget designed to restore the health of a water body. A TMDL first identifies the source(s) of the pollutant from direct and indirect discharges in order to next determine the maximum amount of pollutant (including a margin of safety) that can be discharged to a specific water body while maintaining water quality standards for designated uses. It then outlines a plan to meet the goal.

A TMDL has not yet been developed for the Town River. In the interim, EPA is developing the conditions for this permit based on a combination of water quality standards and Best Professional Judgement (BPJ). If a TMDL developed in the future identifies that the discharge from the facility is causing or contributing to the non-attainment of surface water quality criteria, the permit may be re-opened.

Based on the nature of the storm water discharges for the Sprague Energy Facility, they are not expected to contribute to the existing impairments due to organic enrichment/ low DO and pathogens.

IV. Limitations and Conditions

The effluent limitations of the draft permit, the monitoring requirements, and any implementation schedule (if required) may be found in the draft permit.

V. Permit Basis: Statutory and Regulatory Authority

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a NPDES permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. This Draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State regulations. During development, EPA considered the most recent technology-based treatment requirements, water quality-based requirements, and all limitations and requirements in the current/existing permit. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136. The general conditions of the Draft Permit are based on 40 CFR §122.41 and consist primarily of management requirements common to all permits. The effluent monitoring requirements have been established to yield data representative of the discharge under authority of Section 308(a) of the CWA in accordance with 40 CFR §122.41(j), §122.44(i) and §122.48.

A. Technology-Based Requirements

Subpart A of 40 CFR §125 establishes criteria and standards for the imposition of technology based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA.

Technology-based treatment requirements represent the minimum level of control that must be

imposed under Sections 301(b) and 402 of the CWA (See 40 CFR §125 Subpart A) to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. In general, technology-based effluent guidelines for non-POTW facilities must be complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1989 [See 40 CFR §125.3(a)(2)]. Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA can not be authorized by a NPDES permit.

Storm water discharges from activities associated with petroleum bulk stations and terminals must satisfy best conventional technology (BCT) and best available technology (BAT) requirements and must comply with more stringent water quality standards if BCT and BAT requirements are not adequate. On September 25, 1992, EPA promulgated through its General Permit for Storm Water Discharge Associated with Industrial Activity, that the minimum BAT/BCT requirement for storm water discharges associated with industrial activity is a Storm Water Pollution Prevention Plan (SWPPP) [57 FR, 44438].

Best Professional Judgement (BPJ)

EPA has not promulgated technology-based National Effluent Guidelines for storm water discharges from petroleum bulk stations and terminals (Standard Industrial Code 5171). In the absence of technology-based effluent guidelines, the permit writer is authorized under Section 402(a)(1)(B) of the CWA to establish effluent limitations on a case-by-case basis using Best Professional Judgement (BPJ). The authority for BPJ is contained in Section 402(a)(1) of the CWA, which authorizes the EPA Administrator to issue a permit containing "such conditions as the Administrator determines are necessary to carry out the provisions of the Act." The NPDES regulations in 40 CFR § 125.3(c)(2) state that permits developed on a case-by-case basis under Section 402 (a)(1) of the CWA must consider (*i*) the appropriate technology for the category class of point sources of which the applicant is a member, based on available information, and (*ii*) any unique factors relating to the applicant.

B. Water Quality-Based Requirements

Water quality-based criteria are required in NPDES permits when EPA and the State determine that effluent limits more stringent than technology-based limits are necessary to maintain or achieve state or federal water-quality standards (See Section 301(b) (1)(C) of the CWA). Water quality-based criteria consist of three (3) parts: 1) beneficial designated uses for a water body or a segment of a water body; 2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s) of the water body; and 3) anti-degradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts State Water Quality Standards, found at 314 CMR 4.00, include these elements. The State Water Quality Regulations limit or prohibit discharges of pollutants to surface waters and thereby assure that the surface water quality standards of the receiving water are protected, maintained, and/or attained. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section 304(a) of the CWA, be used unless

site-specific criteria are established. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts. The State of Massachusetts has a similar narrative criteria in their water quality regulations that prohibits such discharges [See Massachusetts 314 CMR 4.05(5)(e)]. The effluent limits established in the Draft Permit assure that the surface water quality standards of the receiving water are protected, maintained, and/or attained.

C. Anti-Backsliding

EPA's anti-backsliding provision as identified in Section 402(o) of the Clean Water Act and at 40 CFR §122.44(l) prohibits the relaxation of permit limits, standards, and conditions unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued. Anti-backsliding provisions apply to effluent limits based on technology, water quality, BPJ and State Certification requirements. Relief from antibacksliding provisions can only be granted under one of the defined exceptions [See 40 CFR §122.44(l)(i)]. Since none of these exceptions apply to this facility, the effluent limits in the Draft Permit must be as stringent as those in the Current Permit.

D. Anti-Degradation

The Massachusetts Anti-Degradation Policy is found at Title 314 CMR 4.04. All existing uses of the Town River must be protected. The EPA anticipates that the MassDEP shall make a determination that there shall be no significant adverse impacts to the receiving waters and no loss of existing uses as a result of the discharge authorized by this permit. This Draft Permit is being reissued with allowable effluent limits as stringent as or more stringent than the Current Permit and accordingly will continue to protect the existing uses of the Town River.

VI. Explanation of the Permit's Effluent Limitation(s)

A. Facility Information

Sprague Energy is a bulk oil storage facility that handles diesel fuel, kerosene, No. 2 Fuel Oil, and No. 6 Fuel Oil. It is located on the southern shore of the Town River in Quincy, MA and covers approximately 10 acres. The facility consists of three principal areas: the marine vessel dock, the truck loading racks and the tank farm (See Attachment C- Site Plan and Drainage Diagram). Storm water discharges from the truck loading racks and the tank farm are included in this permit. Off-loading practices from the marine vessel dock to the facility are regulated by the Coast Guard and are not covered under this permit. Permit coverage begins when the product reaches the first two valves that are located on land.

The marine vessel dock is used to transfer the distillate petroleum and residual fuel products from ships and barges to the facility. All pipes are located above a concrete trough and catch basins. These conveyances direct flows from storm water or potential spills to the containment berm around the tank farm that drains into Oil/ Water separator 2. Floatable booms create a

containment area between the land and the barge for additional protection in the event of a spill. This is required by the City of Quincy, MA.

The truck loading rack consists of 36,000 square feet of impervious surface and is located along the Southern Artery (Route 3A). It contains the main office building, an employee parking lot, a distillate truck rack and a residual oil truck rack. In addition, a small shed contains absorbent materials that are used to remove oil from the O/W separators (OWSs) and the truck loading racks. This shed is listed as 'Hazwaste storage' on the site diagram provided in Attachment C. The truck loading area is used for transfer of petroleum products to trucks for distribution, transfer of equipment to/from the maintenance building, storage of equipment repair materials, and vehicular traffic. No fueling or washing of vehicles or equipment occurs in this area. The area is graded so that all water flows to a catch basin that leads to OWS 1.

The tank farm consists of 220,000 square feet of dense, compact gravel and earth, about 80,000 square feet of which is impervious. It is used for transfer of petroleum products from ships and barges and product storage within the tank farm. It includes 12 vertical above ground bulk storage tanks that are used to store JP-5, diesel fuel, kerosene, No. 2 fuel oil and No. 6 fuel oil. These tanks range in size from 5,000 to 150,000 barrels (bbls). An additional twelve above ground tanks (1 vertical, 11 horizontal) store between 100 gal and 190 bbls of the fuel additives red dye, heatforce, lubricity, diesel, # 2 Fuel oil, and Jet A filter. Mixing of the petroleum products and additives is a closed system that occurs within the fuel lines. There is one underground tank located on the site that is unused and filled with sand. A summary of the tank capacities is included in Attachment D.

Tanks undergo an external visual inspection annually and an internal inspection once every five years. These are in accordance with the American Petroleum Institute (API) Standard 653: Tank Inspection, Repair, Alteration and Reconstruction. The internal inspections include spark tests and ultrasonic tests to determine the integrity of both the shell and bottom of the tank. Pipes and fuel lines undergo annual hydrostatic testing using fuel in place of water. No waste water discharge is produced from these activities.

Secondary containment consists of an earthen dike that surrounds the tank farm area and prevents potential contamination of the Town River, truck loading rack area, and nearby communities. Lower internal dikes, which function as fire walls, separate groups of tanks within the containment area. Culverts under the internal dikes allow storm water to drain towards a central swale, which flows into O/W separator 2. The total storage capacity provided by the secondary containment is 7,175,000 gallons (227,777.8 bbls), which is 110% of the volume of the largest tank as required by the facility's Spill Prevention Control and Countermeasure (SPCC) plan.

There is an active groundwater remediation system on-site consisting of several monitor wells located next to the Southern Artery. These wells contain oil skimmers that remove oil from the ground water via a selective membrane. The skimmers are checked once a month and, if oil is present, the oil is collected and either used at the facility or sold. On average, the wells produce about 2-3 gallons of oil each month. Results are documented by the permittee's Licensed Site Professional (LSP) and sent to MassDEP in an annual report. No groundwater is extracted from

the wells or discharged anywhere on-site.

B. Permitted Outfalls

Storm water for the facility is collected in the areas of the truck loading racks and the tank farm (see Attachment C). The drainage for outfall 001 encompasses the truck loading rack area where the surface has an estimated runoff coefficient of 0.95. The runoff coefficient is a ratio of the amount of runoff to the amount of precipitation received and a high coefficient signifies a largely impervious surface. The area is mostly pavement with some portions of packed gravel and earth surrounding the office building and truck loading area. In addition, vegetation grows along the site perimeter. The truck loading racks have drip buckets located under each line used to transfer product to the trucks to minimize the potential of incidental spills and drips.

A berm surrounds the parking lot area to prevent the flow of facility storm water to nearby communities. In addition, the area is graded so that storm water flows either to areas of vegetation or to the on-site catch basin. The catch basin for this area empties directly into OWS 1, which is a baffled American Petroleum Institute (API) model. OWS 1 has a maximum capacity of 11,000 gallons and a design flow rate of 100 gallons per minute (GPM). Absorbent booms are used and replaced regularly to remove oil from the OWS. Discharge from OWS 1 enters the municipal storm drain system, which empties into the Town River southeast of the facility. The sample point for Outfall 001 occurs before the discharge is commingled with city storm water.

The drainage area for outfall 002 contains the tank farm and has an estimated runoff coefficient of 0.88. The majority of the site drainage flows towards a central swale located near the tank farm oil/water separator. Drainage that collects in additional areas of the tank farm either evaporates or is transferred to the swale via a portable pump. The swale is gravity fed into OWS 2, which is a highland model equipped with coalescer plates to enhance its removal efficiency. OWS 2 has a capacity of 8,000 gallons and has a maximum design flow rate of 600 gallons per minute (gpm). A manually activated, electric discharge pump controls the discharge from this separator into the Town River.

Flow rates through the OWSs are not to exceed the design capacity of the separator, thereby minimizing the potential for carry-over of heavier particulate matter and lighter oil and grease components. Sprague Energy has indicated that the flow through OWS 1 is controlled by limiting the rate at which storm water enters the tank by a manual butterfly valve. A visual inspection of the water is completed each time prior to opening the valve. Flow through OWS 2 is controlled by limiting the rate at which water is pumped out of the separator. The flow rate of the pump is 600 GPM which is equal to the design flow rate of the OWS.

No non-storm water discharges are included in the permitted outfalls. Sprague Energy has indicated that all oil collected in the OWSs and all tank bottom water obtained from the bulk storage tanks is sent off-site for treatment and/or disposal. The active groundwater remediation system produces no on-site discharge of groundwater, and any oil removed from the monitor wells is recycled at the facility. There have been no hydrostatic-test water discharges reported at the facility since 1996.

C. Derivation of Effluent Limits under the Federal CWA and/or the Commonwealth of Massachusetts' Water Quality Standards

The Draft Permit for Sprague Energy, authorizing the discharge of treated storm water, includes numeric effluent limits and requires the development, implementation, and annual review of a SWPPP prepared for the facility. The effluent parameters in the Draft Permit are discussed in more detail below according to the effluent characteristic(s) being regulated.

1. Flow

The typical treatment technology employed by petroleum bulk storage terminals for storm water runoff is an O/W Separator. This device uses gravity to separate the lower-density oils from water; resulting in an oil phase above the oil/water interface and a heavier particulate phase (sludge) on the bottom of the separator. Accordingly, the sizing of an O/W Separator is based upon the following design parameters: water-flow rate; density of oil to be separated; desired percentage removal of oil; and the operating temperature range.

To ensure proper operation of installed O/W Separators such that the oil and/or particulate phases are not entrained to the waterway, it is important that the flow through the separator be maintained at or below the maximum design flow rate of the separator.

Sprague Energy has identified that the maximum design flow rates of OWS 1 and OWS 2 are 100 GPM and 600 GPM, respectively. EPA is using this design flow information to identify the maximum daily effluent flow limit for Outfalls 001 and 002. The instantaneous flow rate of 100 gpm will become the new flow limit for Outfall 001 and the instantaneous flow rate of 600 gpm will become the new flow limit for Outfall 002 as identified in the Draft Permit.

Sprague Energy also indicated that the flow through OWS 1 is controlled by limiting the rate at which storm water enters and exits the O/W Separator; this is accomplished through the manual operation of two butterfly valves. The flow through OWS 2 is controlled through the manual operation of a pump located within the separator. The design capacity of the pump is 600 gpm, which is the same as the design capacity of the OWS 2.

In order to ensure that the maximum design flow rate of the O/W Separators will not be exceeded, the Draft Permit requires that the permittee identify the measures and methods used to estimate flow rate through each O/W Separator and to control their intake and discharge of storm water. This should be submitted to EPA at the time of the next NPDES permit application. In addition, the Draft Permit requires the permittee to submit to EPA, at the time of their first DMR, the standard method used to estimate the flow rate through OWS 1.

The Draft Permit requires that the facility provide written notification and receive approval by EPA and Mass DEP for any proposed changes which have the potential to cause the maximum design flow rate through either OWS to be exceeded.

2. Total Suspended Solids (TSS)

The Draft Permit limit for TSS remains unchanged from the existing permit at 30 mg/l and 100 mg/l for the average monthly and maximum daily values, respectively. The monitoring frequency will remain monthly as identified in the existing permit.

The TSS limits in the Draft Permit are based upon the limits established in the existing permit in accordance with the anti-backsliding requirements found in 40 CFR §122.44(l). Heavy metals and polynuclear aromatic hydrocarbons are readily adsorbed onto particulate matter and the release of these compounds into the environment can be reduced by regulating the amount of suspended solids discharged.

The limits in the existing permit were developed based upon a BPJ determination. The existing fact sheet contained the following explanation:

> *In making this determination, EPA considered the technology guidelines promulgated at 40 CFR Part 423 for the Steam Electric Power Point Source Category for guidance. Steam electric generating facilities, similar to bulk petroleum storage facilities, frequently include the storage of fuel oil on their premises. In developing effluent limits for Steam Electric Source Category, EPA identified TSS as a potential pollutant due to the drainage associated with equipment containing fuel oil and/or the leakage associated with the storage of oil (USEPA, 1982). EPA then considered the level of treatment that could be technologically achieved for TSS using an O/W Separator and set corresponding limits in the guidelines (See 40 CFR Part 423 "low volume waste sources"). Given the similarities between the storage of petroleum products at bulk stations and terminals and the storage of fuel oil at steam electric facilities, EPA is using the same TSS limits established for steam electric facilities for bulk petroleum storage facilities.*

Outfall 001 had a monthly average TSS exceedance in January of 2006. Outfall 002 exceeded the monthly TSS average in October 2004.

3. Oil and Grease

The Draft Permit limit for Oil and Grease (O&G) remains unchanged from the existing permit at 15 mg/L, for the maximum daily value. The monitoring frequency for this parameter will remain at monthly as designated in the existing permit. Originally this effluent limit was established by EPA-Headquarters as guidance to, and as a means of establishing a categorization within, the petroleum marketing terminals and oil production-facilities - categories. However, performance data from terminals in Massachusetts and Maine continue to support that this effluent limit can be achieved through the proper operation of a correctly-sized O/W Separator and properly implemented best management practices. EPA has made a BPJ determination based upon the technology-based and performance information to continue with an O&G limit of 15 mg/L in the Draft Permit.

4. pH

Massachusetts State Surface Water Quality Standards require the pH of Class SB waters to be within the range of 6.5 to 8.5 standard units (s.u.). The pH permit limit range of 6.5 to 8.5 as identified in the Draft Permit, which is to be monitored on a monthly basis, has been established in accordance with the State Surface Water Quality Standards. The discharge shall not exceed this pH range unless due to natural causes. In addition, there shall be no change from background conditions that would impair any uses assigned to the receiving water class. A summary of the discharge monitoring data submitted by the facility during the time period of November 2003 to March 2006 is included as Attachment B to this Fact Sheet. Multiple violations of the lower pH limit were noted, which could be attributed to the acidity in rain water.

5. Polynuclear Aromatic Hydrocarbons

Polynuclear Aromatic Hydrocarbons (PAHs) are a group of organic compounds which are found throughout the environment. PAHs are primarily introduced into the environment through the incomplete combustion of organic compounds. PAHs are also present in crude oil and some of the heavier petroleum derivatives and residuals (e.g., No. 2 Fuel Oil and asphalt). Spillage or discharge of these products can serve to introduce PAHs into the environment. PAHs will strongly adsorb to suspended particulates and biota and can also bio-accumulate in fish and shellfish.

There are sixteen (16) PAH compounds identified as priority pollutants under the CWA (See 40 CFR 423 - Appendix A). Group I PAHs are seven well known animal carcinogens. They are: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, and Indeno(1,2,3-cd)pyrene. Group II PAHs are the nine priority pollutant PAHs not considered carcinogenic alone, but which can enhance or inhibit the response of the carcinogenic PAHs. They are Acenaphthene, Acenaphthylene, Anthracene, Benzo (g,h,i) perylene, Fluoranthene, Fluorene, Napthalene, Phenanthrene, and Pyrene. Typically, exposure would be to a mixture of PAHs rather than to an individual PAH.

The application submitted by the permittee indicates that none of the sixteen (16) PAH compounds are currently present at the facility above the non-detect level. In addition, EPA has reviewed the discharge monitoring data for PAHs submitted by Sprague Energy since the issuance of the Current Permit in 2003 (see Attachment B). The sixteen (16) PAHs analyzed for were not detected above their respective reporting limits during any of the quarterly sampling events which occurred since 2003. A separate summary table providing the monitoring results from 2003 to 2006 for PAHs with their respective detection limits can be found in Attachment C to this Fact Sheet. As can be seen from a review of the attachments, there were no PAHs detected at the facility since the issuance of the Current Permit.

Based on EPA's review of the data from this facility as well as other bulk storage facilities, EPA has concluded that more stringent permit limits for PAH compounds at Outfalls 001 and 002 are

not required at this time. The Draft Permit contains quarterly reporting requirements for Group I PAHs as continued from the existing permit.

In addition, future sampling and analysis will be required to achieve the following Minimum Level (ML) of reporting for each of the PAH compounds identified below:

Group I PAHs:

Benzo (a) anthracene	<5.0 µg/l	Benzo (a) pyrene	<10.0 µg/l
Benzo(b) fluoranthene	<10.0 µg/l	Benzo(k) fluoranthene	<10.0 µg/l
Chrysene	<10.0 µg/l	Dibenzo (a,h) anthracene	<10.0 µg/l
Indeno (1,2,3-cd) pyrene	<10.0 µg/l	Napthalene	<2.0 µg/l

The ML is defined as the level at which the entire analytical system gives recognizable mass spectra and acceptable calibration points. This level corresponds to the lower points at which the calibration curve is determined based on the analysis of the pollutant of concern in reagent water

EPA has added naphthalene to the list of PAH compounds to be reported without limits by the facility in the Draft Permit. Naphthalene is considered an important limiting pollutant parameter based upon the prevalence of this compound in petroleum products and its toxicity (i.e., naphthalene has been identified as a possible human carcinogen).

6. Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)

Refined petroleum products contain numerous types of hydrocarbons. Individual components partition to environmental media on the basis of their physical/chemical properties (e.g., solubility, vapor pressure). Rather than attempt to establish effluent limits for every compound found in a petroleum release, limits are typically established for the compounds that would be the most difficult to remove as well as demonstrate the greatest degree of toxicity. Generally, the higher the solubility of a volatile organic compound (VOC) in water, the more difficult it is to remove.

VOCs such as benzene, toluene, ethylbenzene, and the three xylene compounds (BTEX) are normally found at relatively high concentrations in gasoline and the light distillates (e.g., diesel fuel) and then at decreasing concentrations in the heavier grades of petroleum distillate products (e.g., fuel oils). Since many petroleum spills involve gasoline or other light distillates, a traditional approach for such spills has been to limit the aggregate parameter of BTEX compounds. This approach partially stems from the availability of information concerning the health effects and physical properties of these compounds as well as the relatively high concentrations at which they are found in gasoline and other light distillates.

Of these four compounds, benzene has one of the highest solubilities, it is one of the most toxic constituents, and is found at relatively high concentrations in the light distillates. The concentration of benzene in gasoline is approximately 20,000 parts per million (Potter, 1998). The concentration in diesel fuel, although several orders of magnitude smaller than that found in gasoline, is still significant from an environmental perspective. The average percent by weight of

benzene in diesel fuel is approximately 0.03 percent (Potter and Simmons, 1998) which is equivalent to a concentration of benzene of approximately 300 parts per million. This value is well above the recommended Federal Water Quality Criteria of 0.051 parts per million (or 51 parts per billion) for benzene.

Because of the reasons mentioned above, benzene can be considered one of the most important limiting pollutant parameters found in gasoline or other light distillates. Building on this premise, benzene can be used as an indicator-parameter for regulatory as well as characterization purposes of storm water which comes in contact with light distillate products. The primary advantage of using an indicator-parameter is that it can streamline monitoring efforts while simultaneously maintaining an effective level of environmental protection.

The permittee's application indicated that no VOCs are present above the non-detect level. However, EPA believes that there is a reasonable potential to impact human health and the environment if there was a release of diesel fuel. To better regulate the "potential" for diesel fuel to come in contact with storm water via ancillary operations at this facility (i.e., such as product spills during loading and unloading operations), EPA has included a quarterly monitoring requirement for BTEX and a maximum daily effluent limit of 51 µg/L for benzene in the Draft Permit.

In establishing the effluent limit for VOCs in the Draft Permit, EPA reviewed all appropriate criteria including the most recent recommended Federal Water Quality Criteria and the quarterly monitoring results for BTEX obtained from the discharges of similar facilities. The benzene limit of 51 µg/L is based on the human health criteria associated with the consumption of aquatic organisms (USEPA, 2002). EPA believes that the inclusion of monitoring for BTEX with a limit for benzene is necessary for the protection of human health and to maintain the water quality standards established under Section 303 of the CWA.

Another potential VOC contaminant of concern found in gasoline is methyl tertiary-butyl ether (MTBE). MTBE is a synthetic compound used as a blending component in gasolines (e.g., oxygenated fuels, reformulated gasolines, and conventional gasolines). Due to its small molecular size and solubility in water, MTBE moves rapidly in groundwater. As a result this compound has been identified in a number of public and private wells throughout the United States. The Draft Permit does not include monitoring for methyl tertiary-butyl ether (MTBE) because gasoline is not one of the products stored at the Sprague Energy Facility.

7. Tank-Bottom and Bilge Water

The bottom of many petroleum product storage tanks may contain a layer of water that has separated from the stored petroleum product due to the density difference between the product and water. As this water coalesces and then settles to the bottom of the tank, compounds including BTEX and PAHs found in the product above it are able to partition and dissolve into the water. The partitioning and dissolution allows the concentrations of some of the more soluble and denser petroleum components to reach toxic levels. Facility operators drain this layer of water to prevent transfer with the finished product as well as to free up valuable storage space. Whereas storm water contacts only those hydrocarbons spilled on the ground and then only for

short periods of time; tank bottom and bilge water remains in intimate proximity with petroleum derivatives for prolonged periods of time, allowing toxic pollutants to dissolve into the aqueous phase. EPA Region I considers both tank-bottom and bilge water "process wastewater", since soluble toxic materials can partition from the petroleum product into the water over time. To protect the Town River Bay from toxic pollutants dissolved in tank-bottom and bilge water, EPA is prohibiting the permittee from discharging any tank-bottom or bilge water alone or in combination with storm water or other wastewater.

8. Storm Water Pollution Prevention Plan (SWPPP)

This facility engages in activities which could result in the discharge of pollutants to waters of the United States either directly or indirectly through storm water runoff. These operations include at least one of the following: material storage, in-facility transfer, material processing, material handling, or loading and unloading. To control the activities/operations, which could contribute pollutants to waters of the United States, potentially violating the State's Water Quality Standards, the Draft Permit requires the facility to maintain, update and implement a Storm Water Pollution Prevention Plan (SWPPP) containing BMPs appropriate for this specific facility (See Sections 304(e) and 402(a)(1) of the CWA and 40 CFR §125.103(b)). Specifically, at this facility, routine maintenance and cleaning of the oil/water separators for both sludge layer and oil layer are examples of material storage, processing and handling operations that shall continue to be included in the SWPPP.

The goal of the SWPPP is to eliminate or reduce the potential for the discharge of pollutants through the storm water system. The SWPPP requirements in the Draft Permit are intended to provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions or the permit. The SWPPP shall be prepared in accordance with good engineering practices and identify potential sources of pollutants, which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. The SWPPP, upon implementation, becomes a supporting element to any numerical effluent limitations in the Draft Permit. Consequently, the SWPPP is as equally enforceable as the numerical limits.

This process involves the following four main steps:

(1) Forming a team of qualified facility personnel who will be responsible for updating the SWPPP and assisting the plant manager in its implementation;
(2) Reassessing the potential storm water pollution sources;
(3) Selecting and implementing appropriate management practices and controls for these potential pollution sources; and
(4) Reevaluating, periodically, the effectiveness of the SWPPP in preventing storm water contamination and in complying with the various terms and conditions of the Draft Permit.

VII. Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. Sect. 1801 et seq. (1998)), EPA is required to consult with the National Marine Fisheries Service (NMFS) if EPA's action or proposed actions that it funds, permits or undertakes, "may adversely impact any essential fish habitat." 16 U.S.C. Sect. 1855(b). The Amendments broadly define "essential fish habitat" (EFH) as "waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." 16 U.S.C. Sect. 1802(10). Adverse impact means any impact which reduces the quality and/or quantity of EFH. 50 CFR Sect. 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative or synergistic consequences of actions. Essential Fish Habitat is only designated for fish species for which federal Fisheries Management Plans exist. 16 U.S.C. Sect. 1855(b)(1)(A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.

A review of the relevant essential fish habitat information provided by NMFS indicates that essential fish habitat has been designated for 23 managed species within the NMFS boundaries encompassing the outfall location. A copy of the managed species within the EFH is included in Attachment E of this Fact Sheet. EPA has concluded that the permitted discharge will not likely adversely impact the EFH and the managed species identified for this general location. This conclusion is based on the amount and frequency of the discharge, as well as effluent limitations and other permit requirements that are identified in this Fact Sheet. These factors are designed to be protective of all aquatic species, including those with EFH designations.

EPA has determined that no EFH consultation with NMFS is required because the proposed discharge will not adversely impact the EFH. If adverse impacts are detected as a result of this permit action, NMFS will be notified and an EFH consultation will promptly be initiated. A copy of the Draft Permit has been provided to the NMFS for review and comment.

VIII. Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA) grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants (“listed species”) and habitat of such species that has been designated as critical (a “critical habitat”). The ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to insure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) administers Section 7 consultations for freshwater species. The National Marine Fisheries Service (NMFS) administers Section 7 consultations for marine species and anadromous fish.

EPA has reviewed the federal endangered or threatened species of fish, wildlife, or plants to see if any such listed species might potentially be impacted by the re-issuance of this NPDES permit. EPA believes the proposed limits are sufficiently stringent to assure that water quality standards will be met and to ensure protection of aquatic life and maintenance of the receiving water as an aquatic habitat. The Region finds that adoption of the proposed permit is unlikely to adversely

affect any threatened or endangered species or its critical habitat. If adverse effects do occur as a result of this permit action, or if new information becomes available that changes the basis for this conclusion, then EPA will notify and consultation promptly initiated with both the USFWS and the NMFS. A copy of the Draft Permit has been provided to both USFWS and NMFS for review and comment.

IX. Monitoring

The permittee is obligated to monitor and report sampling results to EPA and the MassDEP within the time specified within the permit. Timely reporting is essential for the regulatory agencies to expeditiously assess compliance with permit conditions.

X. State Certification Requirements

EPA may not issue a permit unless the State of Massachusetts Department of Environmental Protection with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the State of Massachusetts Department of Environmental Protection has reviewed the draft permit, and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State pursuant to 40 CFR 124.53 and expects that the draft permit will be certified.

XI. Comment Period, Hearing Requests, and Procedures for Final Decisions

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to Sara Green, U.S. EPA, Office of Ecosystem Protection**,** Industrial Permits Branch, 1 Congress Street, Suite 1100, Boston, Massachusetts 02114-2023. Any person, prior to such date, may submit a request in writing for a public hearing to consider the Draft Permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public meeting may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after any public hearings, if such hearings are held, the EPA will issue a Final Permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the Final Permit decision, any interested person may submit a petition for review of the permit to EPA’s Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

XII. EPA Contact

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

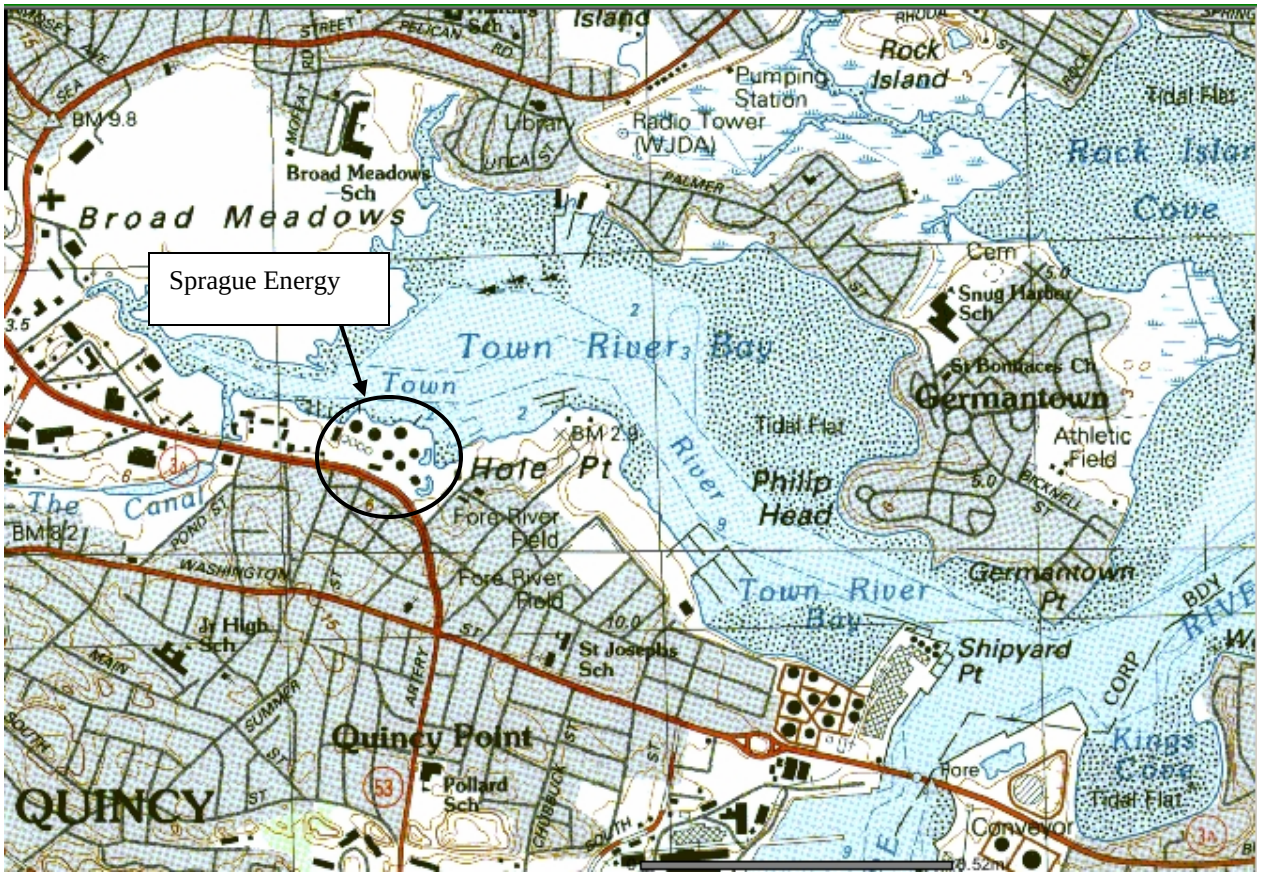
Sara Green, EPA New England – Region I
One Congress Street, Suite 1100 (CIP)
Boston, MA 02114-2023
Telephone: (617) 918-1574 FAX: (617) 918-0574
Email: green.sara@epa.gov

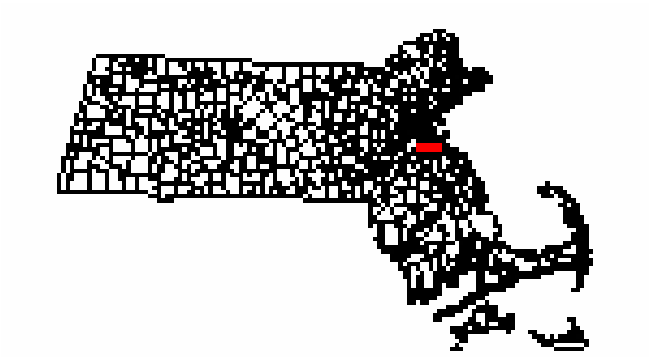
Paul Hogan, Massachusetts Department of Environmental Protection
Division of Watershed Management, Surface Water Permit Program
627 Main Street, Second Floor
Worcester, MA 01608
Telephone: (508) 767-2796
Email: paul.hogan@state.ma.us

January 29, 2007

Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

ATTACHMENT A
Sprague Energy (MA0020869)
Site Locus Map





Source: MassGIS USGS Topographic Maps
United States December 1995

ATTACHMENT B
Sprague Energy (MA0020869)
OUTFALL 001 - SAMPLING RESULTS
November 2003 THROUGH March 2006

MONITORING PERIOD END DATE	Flow		pH (s.u.)		TSS (mg/l)		Oil & Grease (mg/l)
	Daily Maximum (gpd)	Monthly Average (gal/mth)	Max	Min	Daily Maximum	Monthly Average	Daily Maximum
31-Mar-06	522.58	16200	7.4	7.4	4	4	6.1
28-Feb-06	771	21600	7.4	7.4	4	4	6.1
31-Jan-06	1684	52200	7.8	7.8	40	40	6.5
31-Dec-05	ND	ND	ND	ND	ND	ND	ND
30-Nov-05	2100	63000	7.1	7.1	5.2	5.2	6.4
31-Oct-05	5923	183600	7.6	7.1	4	4	5.3
30-Sep-05	367	11000	7	7	4	4	5
31-Aug-05	516	16000	5.9	5.9	4.4	4.4	5.6
31-Jul-05	710	22000	7.4	6.4	5.3	4.8	5.6
30-Jun-05	100	1000	7.8	7.8	5.6	5.6	6.3
31-May-05	-	-	7.7	-	6.4	-	-
30-Apr-05	383	11500	8.2	7.9	10	7.2	6
31-Mar-05	1000	20000	7.9	7.7	7.9	7.6	14
28-Feb-05	786	22000	7.3	7.3	5.6	5.6	6.4
31-Jan-05	677	21000	6.5	6.5	6.8	6.8	5.4
31-Dec-04	-	-	-	-	-	-	-
30-Nov-04	-	-	6.7	6.7	4	4	6.1
31-Oct-04	ND	ND	ND	ND	ND	ND	ND
30-Sep-04	100	2600	7.2	7.2	6.8	6.8	5.3
31-Aug-04	100	12000	7	7	7.6	4	5
31-Jul-04	339	10500	7.2	7.2	5.2	5.2	5
30-Jun-04	60	1200	7.2	7.2	4	4	5.3
31-May-04	300	2500	6.7	6.7	10	10	5
30-Apr-04	600	18000	6.9	6.9	10	10	0
31-Mar-04	100	15000	7	6.9	10	5.6	5.3
29-Feb-04	2500	2500	7	7	5.6	5.6	5.3
31-Jan-04	ND	ND	ND	ND	ND	ND	ND
31-Dec-03	100	2500	7.2	7.1	35	11	5.3
30-Nov-03	-	-	6.2	6.2	6.4	6.4	5.3

Permit Limit	**Report**	**Report**	**6.5 <pH< 8.5**		**100**	**30**	**15**
Minimum	60	1000	5.9	5.9	4	4	0
Maximum	5923	183600	8.2	7.9	40	40	14
Average	897.21	23995.45	7.17	7.08	8.71	7.29	5.73
Standard Deviation	1299.85	38799.88	0.53	0.50	8.93	7.10	2.16
# measurements	22	22	25	25	25	25	24
# exceed limit	NA	NA	2	3	0	1	0

'ND' denotes No Discharge '-' denotes data unavailable

ATTACHMENT B
Sprague Energy (MA0020869)
OUTFALL 002 - SAMPLING RESULTS
November 2003 THROUGH March 2006

MONITORING PERIOD END DATE	Flow		pH (s.u.)		TSS (mg/l)		Oil & Grease (mg/l)
	Daily Maximum (gpd)	Monthly Average (gal/mth)	Max	Min	Daily Maximum	Monthly Average	Daily Maximum
31-Mar-06	3483.87	10800	7	7	7	7	5.7
28-Feb-06	5143	144000	7	7	4	4	5.7
31-Jan-06	11225	348000	7.5	7.5	4	4	6.2
31-Dec-05	ND	ND	ND	ND	ND	ND	ND
30-Nov-05	4000	42000	7.1	7.1	4.8	4.8	5.5
31-Oct-05	39483.87	1224000	7.3	7.1	4	4	5.2
30-Sep-05	4000	120000	7.3	7.3	30	4	6.7
31-Aug-05	6193	192000	6.4	6.4	16	16	5.9
31-Jul-05	7548	234000	6.9	6.4	5.6	4	6.7
30-Jun-05	600	696	8.2	8.2	8	8	6.6
31-May-05	-	-	7.9	-	5.2	-	-
30-Apr-05	324000	10800	7.7	7.5	19	4	5.7
31-Mar-05	600	540000	8.5	6.1	22	18	16
28-Feb-05	11250	315000	7.1	7.1	4	4	5.2
31-Jan-05	7258	225000	7	6.5	6.8	4	5.1
31-Dec-04	14710	456000	6.9	6.9	-	-	5
30-Nov-04	ND	ND	ND	ND	ND	ND	ND
31-Oct-04	3871	120000	6.4	6.4	34	34	5
30-Sep-04	12400	372000	7.3	7.3	4	4	5.4
31-Aug-04	2322	72000	6.8	6.8	3.5	3.5	5
31-Jul-04	-	132000	5.2	5.2	11	11	
30-Jun-04	ND	ND	ND	ND	ND	ND	ND
31-May-04	4645	144000	7.2	7.2	4	4	5.3
30-Apr-04	164000	492000	7.5	7.5	5.6	5.6	-
31-Mar-04	4258	432000	7.6	7.6	6.4	6.4	5
29-Feb-04	400	3310	7.6	7.6	6.4	6.4	5
31-Jan-04	ND	ND	ND	ND	ND	ND	ND
31-Dec-03	-	-	-	-	-	-	-
30-Nov-03	-	-	6.2	6.2	6.4	6.4	5.3

Permit Limit	**Report**	**Report**	**6.5 <pH< 8.5**		**100**	**30**	**15**
Minimum	400	696	5.2	5.2	3.5	3.5	5
Maximum	324000	1224000	8.5	8.2	34	34	16
Average	30066.23	255891.18	7.15	6.99	9.64	7.49	6.11
Standard Deviation	75943.96	274441.44	0.68	0.66	8.64	6.93	2.40
# measurements	21	22	24	24	23	23	20
# exceed limits	NA	NA	4	6	0	1	1

'ND' denotes No Discharge '-' denotes data unavailable

ATTACHMENT B
Sprague Energy (MA0020869)
OUTFALL 001 - PAH RESULTS
2003-2005 Quarterly Storm Water Monitoring Report Results for PAHs

PAH Compound	1st Quarter 2003 (µg/l)	2nd Quarter 2003 (µg/l)	3rd Quarter 2003 (µg/l)	4th Quarter 2003 (µg/l)	1st Quarter 2004 (µg/l)	2nd Quarter 2004 (µg/l)	3rd Quarter 2004 (µg/l)	4th Quarter 2004 (µg/l)	1st Quarter 2005 (µg/l)	2nd Quarter 2005 (µg/l)	3rd Quarter 2005 (µg/l)	4th Quarter 2005 (µg/l)
Benzo (a) anthracene	-	-	8	9	8	10	10	-	12	13	14	ND
Benzo (a) pyrene	-	-	5	6	5	6	6	-	12	13	14	ND
Benzo(b) fluoranthene	-	-	5	6	5	6	6	-	12	13	14	ND
Benzo(k) fluoranthene	-	-	5	6	5	6	6	-	12	13	14	ND
Chrysene	-	-	5	6	5	6	6	-	12	13	14	ND
Dibenzo (a,h) anthracene	-	-	5	6	5	6	6	-	12	13	14	ND
Indeno (1,2,3-cd) pyrene	-	-	5	6	5	6	6	-	12	13	14	ND
Acenaphthene	-	-	5	6	5	6	6	-	12	13	14	ND
Acenaphthylene	-	-	5	6	5	5	6	-	12	13	14	ND
Anthracene	-	-	5	6	5	6	6	-	12	13	14	ND
Benzo (g,h,i) perylene	-	-	5	6	5	6	6	-	12	13	14	ND
Fluoranthene	-	-	5	6	5	6	6	-	12	13	14	ND
Fluorene	-	-	5	6	5	6	6	-	12	13	14	ND
Napthalene	-	-	5	6	5	6	6	-	12	13	14	ND
Phenanthrene	-	-	5	6	5	6	6	-	12	13	14	ND
Pyrene	-	-	5	6	5	6	6	-	12	13	14	ND
2-Methylnaphthalene	-	-	10	11	10	12	12	-	12	13	14	ND
Total PAHs	-	-	**83**	**99**	**83**	**99**	**100**	-	**192**	**208**	**224**	-

'ND' denotes No Discharge '-' denotes data unavailable

Note: The recorded concentration for an individual PAH compound during a given quarter is equal to the reported practical quantitation limit (PQL) of that compound. The PQL value for each compound increased over time due to a decrease in sensitivity of the testing instrument, as indicated by the analytical laboratory used by Sprague Energy (Katahdin Analytical Services).

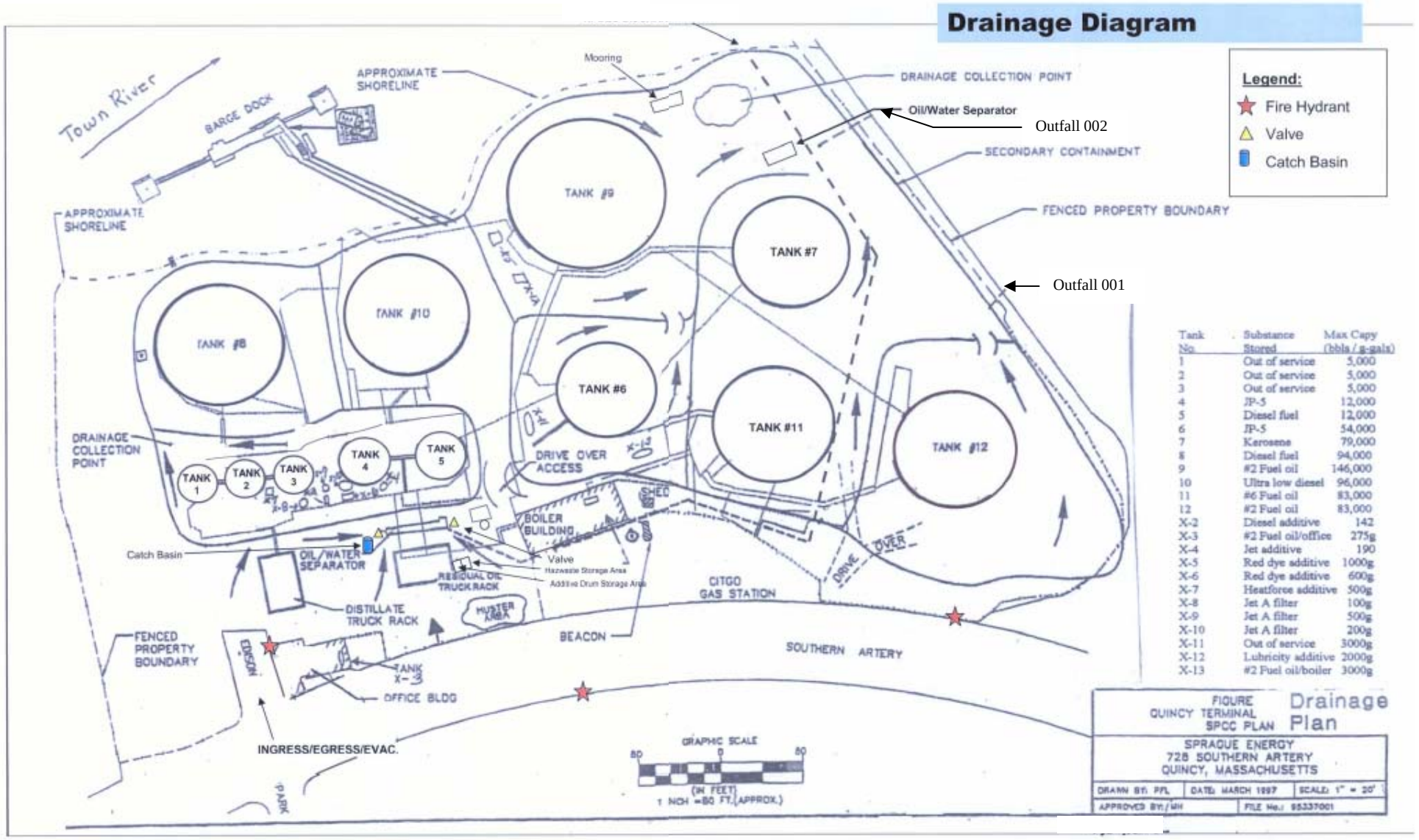
ATTACHMENT B
Sprague Energy (MA0020869)
OUTFALL 002 - PAH RESULTS
2003-2005 Quarterly Storm Water Monitoring Report Results for PAHs

PAH Compound	1st Quarter 2003 (µg/l)	2nd Quarter 2003 (µg/l)	3rd Quarter 2003 (µg/l)	4th Quarter 2003 (µg/l)	1st Quarter 2004 (µg/l)	2nd Quarter 2004 (µg/l)	3rd Quarter 2004 (µg/l)	4th Quarter 2004 (µg/l)	1st Quarter 2005 (µg/l)	2nd Quarter 2005 (µg/l)	3rd Quarter 2005 (µg/l)	4th Quarter 2005 (µg/l)
Benzo (a) anthracene	-	-	-	9	9	9	9	8	11	13	13	ND
Benzo (a) pyrene	-	-	-	6	6	6	5	5	11	13	13	ND
Benzo(b) fluoranthene	-	-	-	6	6	6	5	5	11	13	13	ND
Benzo(k) fluoranthene	-	-	-	6	6	6	5	5	11	13	13	ND
Chrysene	-	-	-	6	6	6	5	5	11	13	13	ND
Dibenzo (a,h) anthracene	-	-	-	6	6	6	5	5	11	13	13	ND
Indeno (1,2,3-cd) pyrene	-	-	-	6	6	6	5	5	11	13	13	ND
Acenaphthene	-	-	-	6	6	6	5	5	11	13	13	ND
Acenaphthylene	-	-	-	6	6	5	5	5	11	13	13	ND
Anthracene	-	-	-	6	6	6	5	5	11	13	13	ND
Benzo (g,h,i) perylene	-	-	-	6	6	6	5	5	11	13	13	ND
Fluoranthene	-	-	-	6	6	6	5	5	11	13	13	ND
Fluorene	-	-	-	6	6	6	5	5	11	13	13	ND
Napthalene	-	-	-	6	6	6	5	5	11	13	13	ND
Phenanthrene	-	-	-	6	6	6	5	5	11	13	13	ND
Pyrene	-	-	-	6	6	6	5	5	11	13	13	ND
2-Methylnaphthalene	-	-	-	11	11	12	11	10	11	13	13	ND
Total PAHs	-	-	-	**99**	**99**	**98**	**84**	**83**	**176**	**208**	**208**	-

'ND' denotes No Discharge '-' denotes data unavailable

Note: The recorded concentration for an individual PAH compound during a given quarter is equal to the reported practical quantitation limit (PQL) of that compound. The PQL value for each compound increased over time due to a decrease in sensitivity of the testing instrument, as indicated by the analytical laboratory used by Sprague Energy (Katahdin Analytical Services).

ATTACHMENT C
Sprague Energy (MA0020869)
Site Plan and Drainage Diagram



Tank No	Substance Stored	Max Capy (bbls / g-gals)
1	Out of service	5,000
2	Out of service	5,000
3	Out of service	5,000
4	JP-5	12,000
5	Diesel fuel	12,000
6	JP-5	54,000
7	Kerosene	79,000
8	Diesel fuel	94,000
9	#2 Fuel oil	146,000
10	Ultra low diesel	96,000
11	#6 Fuel oil	83,000
12	#2 Fuel oil	83,000
X-2	Diesel additive	142
X-3	#2 Fuel oil/office	275g
X-4	Jet additive	190
X-5	Red dye additive	1000g
X-6	Red dye additive	600g
X-7	Heatforce additive	500g
X-8	Jet A filter	100g
X-9	Jet A filter	500g
X-10	Jet A filter	200g
X-11	Out of service	3000g
X-12	Lubricity additive	2000g
X-13	#2 Fuel oil/boiler	3000g

ATTACHMENT D
Sprague Energy (MA0020869)
Summary of On-Site Tank Capacities

Bulk Oil Aboveground Storage Tanks

Tank Number	Substance	Capacity (barrels - bbls)
1	Out of service	5000
2	Out of service	5000
3	Out of service	5000
4	JP-5	12000
5	Diesel Fuel	12000
6	JP-5	54000
7	Kerosene	79000
8	Diesel Fuel	94000
9	No. 2 Fuel Oil	146000
10	Ultra Low Sulphur Diesel	96000
11	No. 6 Fuel Oil	83000
12	No. 2 Fuel Oil	83000

Total Capacity Available	674000 bbls
Total Capacity In-Use	659000 bbls

Aboveground Storage Tanks (vessels)

Tank Number	Substance	Capacity (gallons - gal)
x-2	Diesel Additive	4473
x-3	#2 Fuel Oil/ Office	275
x-4	Jet Additive	5985
x-5	Red dye additive	1000
x-6	Red dye additive	600
x-7	Heatforce additive	500
x-8	Jet A filter	100
x-9	Jet A filter	500
x-10	Jet A filter	200
x-11	#2 Fuel Oil/ Boiler	3000
x-12	Lubricity additive	2000
x-13	#2 Fuel Oil/ Boiler	3000

Total Capacity Available	21633 gal 686.7619 bbls

1 barrel = 31.5 gal

ATTACHMENT E
Sprague Energy (MA0020869)
Summary of Essential Fish Habitat (EFH) Designation

Outfall 001 and 002 - 10' x 10' Square Coordinates

Boundary	North	East	South	West
Coordinate	42°20.0' N	70°50.0' W	42°10.0' N	71°00.0' N

Square Description (i.e. habitat, landmarks, and coastline markers): Waters within the Atlantic Ocean within Massachusetts Bay and within Boston Harbor within the square affecting from north of Black Rock Beach in Cohasset, MA., to Long Island Bridge in Quincy, MA., and including off of Quincy, MA., Hull, MA. These waters also affect the following islands: Peddocks, Long, Gallops, Spectacle, Lovell, Georges, Hangman, Rainsford, southern Great Brewster, and the northwest tip of Thompson, along with Quincy Bay. Also affected include: Worlds End, Planters Hill, Bumkin I., Sheep I., Nantasket Beach, Strawberry Ledge, Harding Ledge, Thieves Ledge, Ultonia Ledge, Pt. Allerton, Spinnaker I., Grape I., Slate I., Hingham Harbor, Hingham MA., Black River, Weymouth, MA., N. Weymouth, MA., Weymouth Fore River, Quincy Pt., Town River Bay, Houghs Neck, and Moon Head.

Species	**Eggs**	**Larvae**	**Juveniles**	**Adults**
Atlantic Cod (*Gadus morhua)*	X	X	X	X
Haddock (*Melanogrammus aeglefinus)*	X	X		
Pollock (*Pollachius virens)*	X	X	X	X
Whiting (*Merluccius bilinearis)*	X	X	X	X
Offshore hake (*Merluccius albidus)*				
Red hake (*Urophycis chuss*)	X	X	X	X
White hake (*Urophycis tenuis)*	X	X	X	X
Redfish (*Sebastes fasciatus)*	n/a			
Witch flounder (*Glyptocephalus cynoglossus)*				
Winter flounder (*Pleuronectes americanus)*	X	X	X	X
Yellowtail flounder (*Pleuronectes ferruginea)*	X	X	X	X
Windowpane flounder (*Scopthalmus aquosus)*	X	X	X	X
American Plaice (Hippoglossoides platessoides)	X	X	X	X
Ocean pout (*Macrozoarces americanus)*	X	X	X	X
Atlantic halibut (*Hippoglossus hippoglossus)*	X	X	X	X
Atlantic sea scallop (*Placopecten magellanicus)*	X	X	X	X
Atlantic sea herring (*Clupea harengus)*		X	X	X
Monkfish (*Lophius americanus)*				
Bluefish (*Pomatomus saltatrix)*			X	X
Long finned squid (*Loligo pealei)*	n/a	n/a	X	X
Short finned squid (*Illex illecebrosus)*	n/a	n/a	X	X
Atlantic butterfish (*Peprilus triacanthus)*	X	X	X	X

Atlantic mackerel (*Scomber scombus*)	X	X	X	X
Summer flounder (*Paralicthys denatatus)*				X
Scup (*Stenotomus chrysops)*	n/a	n/a	X	X
Black sea bass (*Centropistus striata)*	n/a		X	X
Surf clam (*Spisula solidissima)*	n/a	n/a	X	X
Ocean quahog (*Artica islandica)*	n/a	n/a		
Spiny dogfish (*Squalus acanthias)*	n/a	n/a		
Tilefish (*Lopholatilus chamaeleonticeps)*				
Bluefish tuna (*Thunnus thynnus)*			X	X